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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,406	12/21/2001	Shunpei Yamazaki	SEL 297	2501

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07/25/2005

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EXAMINER

LAO, LUN YI

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/026,406	Applicant(s) YAMAZAKI ET AL.	
	Examiner Lao Y Lun	Art Unit 2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above claim(s) 1, 5, 6, 19, 21-24 and 27-30 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3, 4, 7-18 and 33-62 is/are allowed.
- 6) ☒ Claim(s) 2, 20, 25, 26, 31, 32 and 63-65 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 2, 20, 25, 26, 31 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Mikami et al(6,753,834) .

As to claims 2, 20, 25, 26, 31 and 32, Mikami et al teach a light emitting device comprising a pixel having a light emitting element(6); means(20) for storing digital video signals and means(4) for determining a period in which the light emitting element emits a light in accordance with image information of the stored digital video signals and the display period turn up successively in one frame period and the one frame period having a display period and a writing period(see figures 1-2, 7-10; column 1, lines 22-30 and lines 49-57; column 4, lines 39-68; column 5, lines 1-10 and lines 60-64).

As to claims 20 and 25, Mikami et al teach an LCD display(see column 1, lines 5-10).

As to claims 26 and 32, Mikami et al teach an electroluminescence display(EL) (see column 1, lines 5-10).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for a II obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 31, 32, 63 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekiya et al(6,583,775) in view of Bell(4,996,523).

As to claims 2, 31, 32, 63 and 65, Sekiya et al teach a light emitting device comprising a pixel having a light emitting element(OLED)(see figures 1, 5-6); means(C_s) for storing I video signals and means for determining periods in which the light emitting element emits a light corresponding to the video signals and one frame period including display period and writing period(RT)(see figures 1-7, 10-11, 14-15; column 3, lines 7-30; column 10, lines 43-68; column 11, lines 1-39; column 14, lines 51-68; column 15, lines 1-9; column 16, lines 55-68 and column 17, lines 1-28).

Sekiya et al fail to point out the video signals is digital video signals.

Bell teaches a light emitting device comprising a pixel having means(22n) for storing digital video signals and means for determining periods in which the light emitting element emits a light corresponding to the video signals(see figures 1-2; column 1, lines 58-68; column 2, lines 1-9 and lines 51-68; column 3, lines 6-16 and lines 41-68). It would have been obvious to have modified Sekiya et al with the teaching of Bell, so as to improve the image quality.

As to claim 32, Sekiya et al teach an electroluminescent display device(see figure 1 and column 1, lines 5-16).

As to claim 63, Bell et al teach a first and second memories(e.g. 22-1 22-2)(see figure 2).

As to claim 65, Sekiya et al teach on frame period(T) having a non-light emission period(see figure 7).

5. Claims 20, 25-26 and 65 and are rejected under 35 U.S.C. 103(a) as being anticipated by Kanaly(5,225,823) in view Sekiya et al(6,583,775).

As to claims 20, 25-26 and 65, Kanaly teaches an LCD display device comprising a pixel having a liquid crystal cell(19); n bit memory(52, 24 bit registers) for storing digital video signals and means for determining periods in which the liquid crystal is turned on corresponding to the video signals(see figures 3, 5, 7, 9-11; column 5, lines 4-48; column 6, lines 18-61 and column 7, lines 3-55).

Kanaly fails to disclose a frame period including ad display period and a writing period.

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Sekiya et al teach a display device comprising a frame a frame period including a display period and a writing period(RT)(see figures 1-7, 10-11, 14-15; column 1, lines 41-43; column 14, lines 51-68 and column 15, lines 1-9; column 16, lines 55-68 and column 17, lines 1-28). It would have been obvious to have modified Kanaly with the teaching of Sekiya et al, so to reduce two memory into one memory in a pixel by writing and display image in the same frame.

As to claim 26, Sekiya et al teach an electroluminescent display device(see figure 1 and column 1, lines 5-16).

As to claim 65, Kanaly teach means(52) for storing digital video signal is first and second memory(52)(see figure 9 and column 6, lines 51-56).

6. Claims 20 and 25-26 are rejected under 35 U.S.C. 103(a) as being anticipated by Koyama(5,798,746) in view Sekiya et al(6,583,775).

As to claims 20 and 25-26, Koyama teaches an LCD display device comprising a pixel having a liquid crystal cell(121); means(117-120)! for storing digital video signals and means for determining periods in which the liquid crystal is turned on corresponding to the video signals(see figure 1; column 3, lines 58-68 and column 4, lines 1-13).

Koyama fails to disclose a frame period including ad display period and a writing period.

Sekiya et al teach a display device comprising a frame a frame period including a display period and a writing period(RT)(see figures 1-7, 10-11, 14-15; column 1, lines 41-43; column 14, lines 51-68 and column 15, lines 1-9; column 16, lines 55-68 and column 17, lines 1-28). It would have been obvious to have modified Kanaly with the

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teaching of Sekiya et al, since the display data need to stored in a memory before they display(see Sekiya's figures 6-7).

7. Claim 65 is rejected under 35 U.S.C. 103(a) as being anticipated by Koyama(5,798,746) in view Sekiya et al(6,583,775) and Huang(6,731,272).

Koyama as modified fail to disclose second memory for storing video signal.

Huang teaches a second memory(e.g. 2nd bit memory) for storing video signal(see figure 1 and column 2, lines 3-37). It would have been obvious to have modified Koyama as modified with the teaching of Huang so as to more gray scale levels to a display.

Allowable Subject Matter

8. Claims 3-4, 7-18and 33-62 are allowable since none of cited references teach a counter circuit for outputting n counter signals with different frequencies.

Response to Arguments

9. Applicant's arguments with respect to claims 62-65 have been considered but are moot in view of the new ground(s) of rejection.

Applicants argue that Mikami teach a sample circuit for sampling an analog signal on page 28. The examiner is in agreement. However, the analog signal becomes a digital signal in a sampling and hold circuit(2,3) since the capacitor(3) hold

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the video signal in a constant level during one frame period(see figures 1-2, 7-8; column 1, lines 25-30; column 4, lines 56-68 and column 5, lines 1-10).

Applicants argue that Mikami fails to disclose means for storing digital video signal and means for determining ... in accordance with image information of the stored digital signals” on page 29. The examiner disagrees with that since Mikami teach means(one TFT and one capacitor formed a digital memory for storing digital video(maintain constant voltage level during one frame period) and means(4) for determining a period in which the light emitting element emits a light in accordance with image information of the stored digital video signals and the display period turn up successively in one frame period and the one frame period having a display period and a writing period(see figures 1-2, 7-10; column 1, lines 22-30; column 4, lines 56-68; column 5, lines 1-10 and lines 60-64).

Applicants argue that the combination of Sekiya et al and Bell is not proper on page 29. The examiner disagrees with that since Seikiya et al and Bell both teach an LED displays(see Sekiya’s figure 1 and abstract and Bell’s figure 1-2). Sekiya et al as modified by Bell to have a digital LED display could improve a display quality and eliminate external memory and continual refreshing(see Bell’s column 1, lines 16-45).

Applicants argue that Bell does not teach digital video signals used for determine a period in which the light emitting element emits a light on page 30. However, Sekiya et al teaches means for determining a period in which the limit emitting element emits a light in accordance with image information of the stored digital video

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signal(a digital memory made of one TFT2 and one capacitor(CS))(see figures 6-7; column 9, lines 31-39 and column 15, lines 1-3).

Applicants argue that Kanaly does not teach the period turn up successively in one frame period since applicants' application disclose the liquid crystal cell is turned ON only for a period determined by image information of digital video signals on page 31. The examiner disagree with that since Kanaly teaches the period turn up successively in one frame period(see figures 6-11 and column 6, lines 18-56). The limitation of the liquid crystal cell is turned ON only one at a time in one frame period could not found anywhere in claims 20 and 25-26.

Applicants argue that Kanaly does not teach digital video signals used for determining a period in which the liquid crystal device is turned on on page 31. The examiner disagrees with that since Kanaly teaches such feature(see figure 11 and column 7, lines 17-35).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi Lao whose telephone number is 571-272-7671. The examiner can normally be reached on M-F.

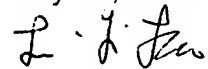
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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July 18, 2005

A handwritten signature in black ink, appearing to read 'L. Y. Lao', written in a cursive style.

Lun-yi Lao
Primary Examiner